

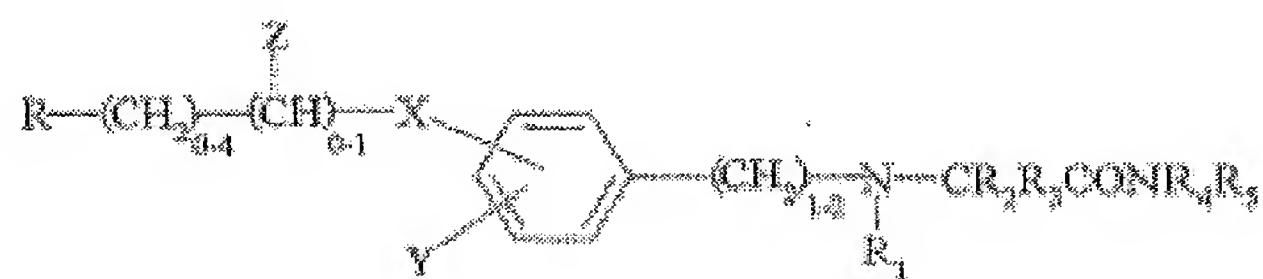
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-8. (cancelled)

9 (previously presented): A method for treating urinary tract infection, comprising administering an effective amount of at least one therapeutic agent which is an alpha-aminoamide compound of formula (I),



(I)

wherein: R is a furyl, thiienyl, or pyridyl ring or a phenyl ring, optionally substituted by one or two substituents independently selected from halogen, hydroxy, cyano, C1-C6 alkyl, C1-C6 alkoxy or trifluoromethyl ; * R1 is hydrogen or C1-C6 alkyl or C3-C7 cycloalkyl ; R2 and R3 are independently selected from hydrogen; C1-C4 alkyl, optionally substituted by hydroxy or phenyl, phenyl, the phenyl rings being optionally substituted by one or two substituents independently selected from C1-C6 alkyl, halogen, hydroxy, C1-C6 alkoxy or trifluoromethyl; or R2 and R3 taken with the carbon atom which they are linked to, form a C3-C6 cycloalkyl ring; # R4, R5 are,

independently, hydrogen, C₁-C₆ alkyl or C₃-C₇ cycloalkyl ; or R₄ and R₅, taken together with the nitrogen atom they are linked to, form a 5-7 atom saturated heterocyclic ring; X is CH₂, O, S; and Z are hydrogen or taken together form a 5-7 saturated or unsaturated carbocycle or a heterocycle; or isomers, mixtures, and pharmaceutically acceptable salts thereof.

10. (previously presented): The method according to claim 9, wherein the compound is selected from: 2- [(3-Benzyl-2, 3-dihydro-benzofuran-5-ylmethyl) -amino] - propanamide ; 2- [(3-Benzyl-2, 3-dihydro-benzofuran-5- ylmethyl) -amino]-N-methyl- propanamide; 2- {3- [2- (2-Fluoro-benzyl)]-2, 3-dihydro-benzofuran-5-ylmethyl}-amino) - propanamide;

 2- {3- [2- (2-Fluoro-benzyl)]- 2, 3-dihydro-benzofuran-5-ylmethyl}-amino)-N- methyl- propanamide; 2- {3- [2- (3-Fluoro-benzyl)]-2, 3-dihydro- benzofuran-5-ylmethyl}-amino)- propanamide;

 2- 3- [2- (3-Fluoro-benzyl)]-2, 3-dihydro-benzofuran-5- ylmethyl}-amino)-N- methyl-propanamide; 2- [(3-Phenethyl-2, 3-dihydro-benzofuran-5-ylmethyl)-amino]-propanamide ; 2- [(3- Phenethyl-2, 3-dihydro-benzofuran-5-ylmethyl)-amino]-N-methyl- propanamide; 2- 3- [2- (2-Fluoro-phenethyl)]-2, 3-dihydro- benzofuran-5-ylmethyl}-amino)- propanamide; 2- 3- [2- (2- Fluoro-phenethyl)]-2, 3-dihydro-benzofuran-5-ylmethyl)-amino)- N-methyl-propanamide ; 2- 3- [2- (3-Fluoro-phenethyl)]-2, 3-

dihydro-benzofuran-5-ylmethyl}-amino)- propanamide;

 2- {3- [2- (3-Chloro-phenethyl)]-2, 3-dihydro- benzofuran-5-ylmethyl}-amino)- propanamide;

 2- {3- [2- (3-Fluoro-phenethyl)]-2, 3-dihydro-benzofuran-5-ylmethyl}-amino)- N-methyl-propanamide; 2- [(3-Phenethyl-2, 3-dihydro-benzopyran-6-ylmethyl) -amino] -propanamide ; 2- [(4-Phenethyl-2, 3-dihydro-benzoxepin-7-ylmethyl) -amino] - propanamide ; 2- [(3-Benzyl-2, 3-dihydro-benzothiophen-5- ylmethyl)-amino]- propanamide ; 2- {3- [2- (2-Fluoro-benzyl)]-2, 3-dihydro-benzothiophen-5-ylmethyl}-amino)- propanamide; 2- {3- [2- (3-Fluoro-benzyl)]-2, 3-dihydro-benzothiophen-5- ylmethyl} -amino)- propanamide; 2- [(3-Phenethyl-2, 3-dihydro-benzothiophen-5-ylmethyl)-amino]-propanamide; 2- {3- [2- (2- Fluoro-phenethyl)]-2, 3-dihydro-benzothiophen-5-ylmethyl}- amino) -propanamide ; 2- {3- [2- (3-Fluoro-phenethyl)]-2, 3- dihydro-benzothiophen-5-ylmethyl}- amino)-propanamide ; 2- {3- [2- (3-Fluoro-phenethyl)]-2, 3-dihydro-benzothiophen-5- ylmethyl}- amino)-N-methyl-prop anamide.

11. (previously presented): The method according to claim 9, wherein the compound is selected from: 2- (4- Phenethyl-benzylamino)-propanamide; 2- (4- Benzyloxybenzylamino)-propanamide ; 2- (3- Benzyloxybenzylamino)-propanamide ; 2- (4- Benzylthiobenzylamino)-propanamide ; 2- (4-Benzyloxy-

benzylamino)-3-N, N-dimethyl-butanamide ; 2- [4- (2-Methoxybenzyloxy)-benzylamino]-propanamide ; 2- [4- (2-Fluorobenzyloxy)-benzylamino]-propanamide ; 2- [3- (2-Fluorobenzyloxy)-benzylamino]-propanamide ; 2- [4- (2-Fluorobenzyloxy)-benzylamino]-2-methyl-propanamide ; 2- [4- (2-Fluorobenzyloxy)-benzylamino]-N-methyl-propanamide ; 2- [3- (3-Fluorobenzyloxy)-benzylamino]-propanamide ; 2- [4- (3-Fluorobenzyloxy)-benzylamino]-propanamide ; 2- [4- (3-Methoxybenzyloxy)-benzylamino]-propanamide ; 2- [4- (3-Cyanobenzyloxy)-benzylamino]-propanamide ; 2- [4- (3-Fluorobenzyloxy)-benzylamino]-propanamide ; 2- [4- (3-Fluorobenzyloxy)-benzylamino]-2-methyl-propanamide ; 2- [4- (3-Fluorobenzyloxy)-benzylamino]-N-methyl-propanamide ; 2- [4- (4-Fluorobenzyloxy)-benzylamino]-propanamide ; 2- [4- (3-Fluorobenzyloxy)-benzylamino]-2-methyl-propanamide ; 2- [4- (2-Chlorobenzyloxy)-benzylamino]-propanamide ; 2- [4- (3-Chlorobenzyloxy)-benzylamino]-propanamide ; 2- (4-Benzyloxybenzylamino)-3-hydroxy-propanamide ; 2- [4- (2-Fluorobenzyloxy)-benzylamino]-3-hydroxy-propanamide ; 2- [4- (3-Fluorobenzyloxy)-benzylamino]-3-hydroxy-propanamide ; 2- (4-Benzyloxybenzylamino)-3-hydroxy-N-methyl-propanamide ; 2- [4- (2-Fluorobenzyloxy)-benzylamino]-3-hydroxy-N-methyl-propanamide ; 2- [4- (3-Fluorobenzyloxy)-benzylamino]-3-

hydroxy-N-methyl-propanamide ; 2- [4- (2-Chlorobenzylxy)-benzylamino]-3-hydroxy-N-methyl-propanamide ; 2- [4- (3-Cyanobenzylxy)-benzylamino]-3-hydroxy-N-methyl-propanamide ; 2- [4- (3-Cyanobenzylxy)-benzylamino]-2-methyl-3-hydroxy-N-methyl- propanamide ; 2- [4- (3-Chlorobenzylxy)-phenylethylamino]-propanamide ; 2- {4- [2- (3-Fluorophenyl)-ethyloxy] benzylamino}-propanamide ; 2- {4- [2- (3-Fluorophenyl)-ethyl] benzylamino}-propanamide ; 2- [N- (4-Benzylxybenzyl)-N-methylamino]-propanamide ; 2- 4- [(3-Chlorobenzylxy)-phenylethyl]-amino}-propanamide ; 2- [4- Benzylthiobenzylamino]-propanamide ; 2- [4- (2-Fluorobenzylthio)-benzylamino]-propanamide ; 2- [4- (3-Fluorobenzylthio)-benzylamino]-propanamide ; 2- [4- (3-Phenylpropyloxy)-benzylamino]-propanamide ; 2- [4- (4-Phenylbutyloxy)-benzylamino]-propanamide ; 2- [4- (5-Phenylpentyloxy)-benzylamino]-propanamide ; 2- (4-Benzylxybenzylamino)-3-phenyl-N-methyl-propanamide ; 2- (4-Benzylxybenzylamino)-3-hydroxy-N-methyl-butanamide ; 2- (4-Benzylxybenzylamino)-3-methyl-N-methyl-butanamide ; 2- (4-Benzylxybenzylamino)-2-phenyl-acetamide ; 2- [4- (2-Fluorobenzylxy)-benzylamino]-2-phenyl-acetamide ; 2- [4- (3-Fluorobenzylxy)-benzylamino]-2-phenyl-acetamide ; 2- [4- (2-Fluorobenzylxy)-benzyl-N-methylamino]-2-phenyl-acetamide ; 2- [4- (3-Fluorobenzylxy)-benzyl-N-methylamino]-2-phenyl-

acetamide ; 2- [4- (3-Chlorobenzylxy) -benzylamino]-2-phenyl-
acetamide ; 2- [4- (2-Fluorobenzylxy) -benzylamino]-2- (2-
fluorophenyl)-acetamide ; 2- [4- (2-Fluorobenzylxy) -
benzylamino]-2- (3-fluorophenyl)-acetamide ; 2- [4- (3-
Fluorobenzylxy) -benzylamino]-2- (2-fluorophenyl)-acetamide ;
2- [4- (3-Fluorobenzylxy) -benzylamino]-2- (3-fluorophenyl)-
acetamide ; 2- [4- (3-Chlorobenzylxy) -benzylamino]-2- (3-
fluorophenyl)-acetamide ; 2- (4- (2-Thienyloxy) -benzylamino)-
propanamide.

12. (previously presented): The method of claim 9,
wherein said lower urinary tract disorders are overactive
bladder (OAB), prostatitis and prostadynia, interstitial
cystitis, benign prostatic hyperplasia and urinary
incontinence as the consequence of the above pathologies.

13. (previously presented): The method of claim 9,
wherein the α -aminoamides are (S)- (+)-2- [3- (2-
fluorobenzylxy) -benzylamino]-propanamide ; (S)- (+)-2- [4-
(2-

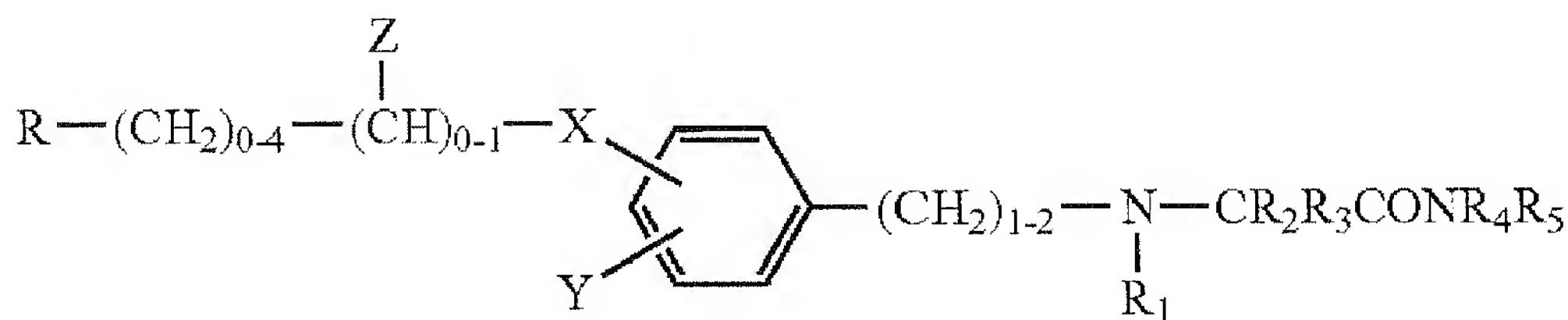
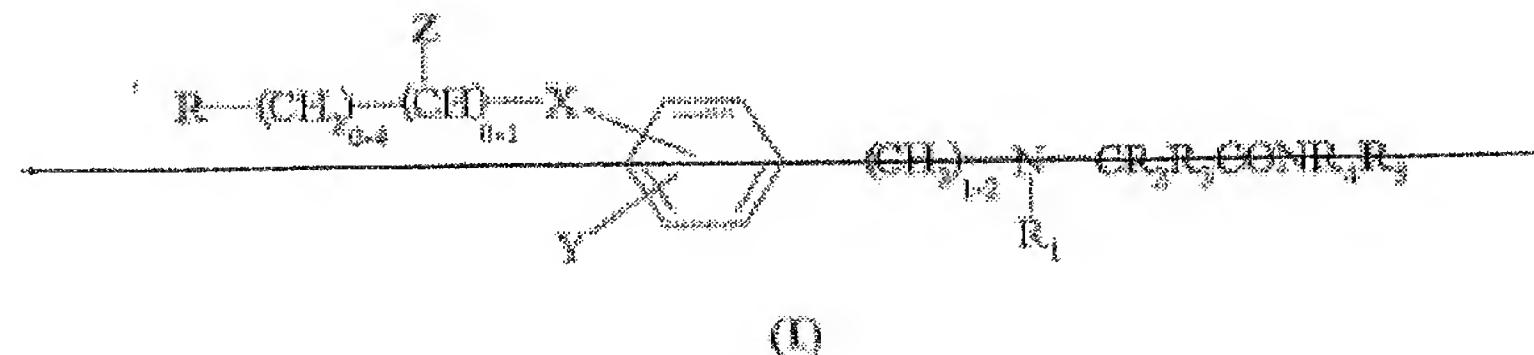
 fluorobenzylxy) -benzylamino]-
propanamide, (S)- (+)-2- [4- (2-fluorobenzylxy) -

 benzylamino] -N-methyl-propanamide,
(S)- (+)-2- [3- (3-fluorobenzylxy) -

 benzylamino] -propanamide, (S)- (+)-2- [4- (3-
fluorobenzylxy) -benzylamino]- propanamide, (R)-2- (4-
Benzylxybenzylamino)-3-phenyl-N-methyl- propanamide; (2R,

(3S)-2-(4-Benzylxybenzylamino)-3-hydroxy-N-methylbutanamide; (S)-(+)-2-[4-(3-fluorobenzylxy)-benzylamino]-N-methyl-propanamide, (S)-(+)-2-(4-phenethyl-benzylamino)-propanamide, (R)-(-)-2-(4-benzylxy-benzylamino)-3-N, N-dimethyl-butanamide, (S)-(+)-2-(4-benzylthiobenzylamino)-propanamide, and 2-[3-phenethyl-2, 3-dihydro- benzofuran-5-ylmethyl)-amino]-N-methyl-propanamide and (2R/3'S, R)-2-[3-phenethyl-2,3-dihydro-benzo furan-5-ylmethyl)-amino]-N-methyl-propanamide, 2-{3-[2-(2-fluoro-phenethyl)]-2, 3-dihydro-benzothiophen-5-ylmethyl}-amino)-propanamide, 2-{3-[2-(3-Fluoro-phenethyl)]-2, 3-dihydro-benzothiophen-5-ylmethyl}-amino)-propanamide, (2R/3'S, R)-2-{3-[2-(2-fluoro-phenethyl)]-2, 3-dihydro-benzothiophen-5-ylmethyl}-amino)-propanamide, (2R/3'S, R)-2-{3-[2-(3-Fluoro-phenethyl)]-2, 3-dihydro-benzothiophen-5-ylmethyl}-amino)-propanamide.

14. (currently amended): An α -aminoamide compound represented by the following ~~of~~ formula (I) [[,]]:



wherein:

R is a furyl, thienyl, or pyridyl ring or a phenyl ring, optionally substituted by one or two substituents independently selected from halogen, hydroxy, cyano, C₁-C₆ alkyl, C₁-C₆ alkoxy or trifluoromethyl;

R₁ is hydrogen or C₁-C₆ alkyl or C₃-C₇ cycloalkyl;

R₂ and R₃ are independently selected from hydrogen, C₁-C₄ alkyl[[,]] optionally substituted by hydroxy or phenyl, phenyl[[,]] in which the phenyl rings being optionally substituted by one or two substituents independently selected from C₁-C₆ alkyl, halogen, hydroxy, C₁-C₆ alkoxy or trifluoromethyl; or R₂ and R₃, taken with the carbon atom which they are linked to, form a C₃-C₆ cycloalkyl ring;

R_4 and R_5 are independently hydrogen, C_1-C_6 alkyl or C_3-C_7 cycloalkyl; or R_4 and R_5 , taken together with the nitrogen atom they are linked to, form a 5-7 atom saturated heterocyclic ring;

X is CH_2CH_2 , O , or S ; $[[\#]]$

Y and Z taken together form a dihydrobenzofuran- ox , a dihydrobenzothiophen, or a dihydrobenzo (thio) pyran, or a tetrahydrobenz (thio) oxepin heterocycle $[[,]]$ and/or isomers, mixtures, and pharmaceutically acceptable salts thereof.

15. (currently amended): The compound according to claim 14, wherein said compound is selected from the group consisting of: 2-[(3-Benzyl-2,3-dihydro-benzofuran-5-ylmethyl)-amino]-propanamide ; 2-[(3-Benzyl-2,3-dihydro-benzofuran-5-ylmethyl)-amino]-N-methyl-propanamide; 2-3-[2-(2-Fluoro-benzyl)]-2,3-dihydro-benzofuran-5-ylmethyl)-amino)-propanamide 2-{3-[2-(2-Fluoro-benzyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-propanamide; $\text{2-3-[2-(2-Fluoro-benzyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-N-methyl-propanamide$ 2-{3-[2-(2-Fluoro-benzyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-N- methyl-propanamide; 2-{3-[2-(3-Fluoro-benzyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-propanamide; 2-{3-[2-(3-Fluoro-benzyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-N- methyl-propanamide; 2-[(3-

Phenethyl-2,3-dihydro-benzofuran-5-ylmethyl)-amino]-propanamide; 2-[(3-Phenethyl-2,3-dihydro-benzofuran-5-ylmethyl)-amino]-N-methyl- propanamide; 2-{3-[2-(2-Fluoro-phenethyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-propanamide;

 2-{3-[2-(2-Fluoro-phenethyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-N-methyl-propanamide ; 2-{3-[2-(3-Fluoro-phenethyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-propanamide; ~~2-3-[2-(3-Chloro-phenethyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-propanamide~~ 2-{3-[2-(3-Chloro-phenethyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-propanamide ~~2-3-[2-(3-Chloro-phenethyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-propanamide~~;

 2-{3-[2-(3-Fluoro-phenethyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-N-methyl-propanamide 2-{3-[2-(3-Fluoro-phenethyl)]-2,3-dihydro-benzofuran-5-ylmethyl}-amino)-N-methyl-propanamide; 2-[(3-Phenethyl-2,3-dihydro-benzopyran-6-ylmethyl)-amino]-propanamide; 2-[(4-Phenethyl-2,3-dihydro-benzoxepin-7-ylmethyl)-amino]-propanamide; 2-[(3-Benzyl-2,3-dihydro-benzothiophen-5-ylmethyl)-amino]-propanamide; 2-{3-[2-(2-Fluoro-benzyl)]-2,3-dihydro-benzothiophen-5-ylmethyl}-amino)-propanamide; 2-{3-[2-(3-Fluoro-benzyl)]-2,3-dihydro-benzothiophen-5-ylmethyl}-amino)-propanamide; 2-[(3-Phenethyl-2,3-dihydro-benzothiophen-5-ylmethyl)-amino]-propanamide; ~~2-3-[2-(2-Fluoro-phenethyl)]-2,3-dihydro-benzothiophen-5-ylmethyl}-amino)-propanamide~~ 2-{3-[2-(2-Fluoro-phenethyl)]-2,3-dihydro-

benzothiophen-5-ylmethyl}-amino)-propanamide; 2-{3-[2-(3-Fluoro-phenethyl)]-2,3-dihydro-benzothiophen-5-ylmethyl}-amino)-propanamide; 2-{3-[2-(3-Fluoro-phenethyl)]-2,3-dihydro-benzothiophen-5-ylmethyl}-amino)-N-methyl-propanamide; ~~or~~ and isomers, mixtures, and or pharmaceutically acceptable salts thereof.

16. (currently amended): A pharmaceutical composition comprising a pharmaceutically acceptable excipient and, as an active agent, an effective amount of ~~a~~ the α -aminoamide compound according to claim 14.